Model 75200

8 Channel CS-5259 Mux

Operation and Maintenance Manual

Manual Rev-

Interface Technology Group, Inc.
2107 South Hwy US-1
Rockledge, FL 32955
V 321-433-1165   F 321-433-0924
Specifications:

Power Input: 90 – 265 VAC 47-470 Hz.
-----------------------------IEC Input connector 10W Nominal
Fuse: 1 Amp
Dimensions: 19” Wide X 1.75” High (1 RU) X 10.25 Deep
Weight: 4.75 Pounds
Operating Environment: 32° F to 100° F, 0 – 95% RH Non condensing
Storage Environment: 0° F to 120° F, 0 – 99% RH Non condensing

Signal Inputs:
8- Channels CS-5246 at 4800 baud. Trompeter type BJ-77 connector.

Signal Outputs:
2- CS-5259 individual buffered outputs (RS-422) on Trompeter type BJ-77 connector.

Remote Control ports:

Ethernet port:
A 10-100 Base T port for control and status.

RS-232 Port:
An RS-232 port is provided for control and status. Set up as: 9600-N-8-1

QUICK START INSTRUCTIONS

In order to get started quickly without reading the entire manual, a quick start lesson is provided here.

With the 8- Channel CS5259 Mux turned on, and power applied, connect one or more CS-5246 signals to the inputs. The two output connectors on the rear panel will output the multiplexed signal. When a valid CS-5246 signal is present, the associated LED will
change color from red to green. To program in a “tag” line, use the RS-232 input, type the word “status” to view all the current “tags”. To change a tag, type “channelx” where x is the channel number you wish to change. Follow the prompts and type up to 16 alphanumeric characters followed by the enter key. The thumbwheel switch selects the channel to be read on the LCD screen. The display mode button cycles through the display options i.e. tag-event, tag-launch time, or event, launch time modes.

**Overview:**

The model #75200 8 Channel Mux allows up to 8 channels of CS-5246 to be multiplexed together into a 38.4 KB stream for distribution. Along with the count data, each channel is allocated 16 characters to be used as “tag” data. This tag data can be any alphanumeric ASCII character string and is associated with a specific channel. Therefore, there are 16 X 8= 128 characters that are transported on the stream. The count data is sent in real time with very little delay. The tag data is sent out as 4 bytes every 100ms. It can take up to 3.2 seconds for all channels in a reader to fully recover all 128 bytes. Since tag data is designed to be used as labels, such as mission number or “local time”, and does not change rapidly, it is not necessary for it to be sent at a high speed.

Having an 8 channel multiplexed signal allows users to have access to multiple counts at their work places. It is not necessary to switch the data stream from a remote location. Tags allow labels to be sent to all users at once and are usually set up before a mission.


**Operation:**

Connect a suitable AC mains power source to the rear IEC connector. Connect one or more CS-5246 signals to the desired input connectors. Turn on the AC power switch on the rear panel.

The Model #75200 will power up and begin sending out the multiplexed stream. If desired, the “tag” data may be entered for each channel. See remote operation for specifics on tag programming.

The thumbwheel selector switch selects which of the 8 channels is displayed on the two line LCD screen. The actual multiplexed stream is decoded and displayed on the 2 line LCD and provides confidence that the actual data is in the stream.

The LCD screen will display the Tag, EC screen as a default on power up. Pressing the Display Mode button will change the display to Tag, Launch Time. Pressing the button again will display EC, LT. Further pressing of the button will start the sequence over again.
Remote Control:

RS-232 Port:

Remote control of the Model #75200 8 Channel Mux is accomplished through the Ethernet port or via the RS-232 port on the rear of the unit.

Connecting a computer running a terminal program such as Hyperterminal set up as 9600-N-8-1 allows control and status information to be passed from or to the multiplexer. A standard straight through cable is required. Only pins 2,3, and 5 are utilized.

Hitting Enter (C/R) will cause the Model #75200 8 Channel Mux to respond with: CS-5X8 MUX #XXXX> Where XXXX is the serial number of the unit.

Entering a keyword (see below for keyword definitions) followed by the enter key will return either the status of the unit or begin an interactive dialog to make changes to one of the two displays.

Ethernet Port:

The Ethernet port may be used in exactly the same way as the RS-232 port by using a Telnet program to connect to the IP address of the Model #75200 8 Channel Mux. The IP address of the port may be set to a fixed address or be dynamically set through DHCP. The factory default is DHCP mode. The default telnet port is 10001. The default XPORT control port is 9999.

The Ethernet port module is a Lantronix XPort module. It is recommended that the Lantronix web site WWW.lantronix.com be consulted to understand how to use the interface. A utility program from Lantronix called Device Installer (current version 4.1.0.9) should be downloaded and used to set up the IP address. This utility program makes it easy to set up the parameters of the XPort device to customize it for the particular network application.

Note that the XPort must be configured to provide a Modem Ctrl Out (DCD) signal on configurable pin (CP) #1 (input, active low). This is necessary for the Model #75200 8 Channel Mux to switch control ports from the RS-232 to the ethernet port when a telnet session is established.

KEYWORDS:

The following are keywords or words that are used by the Model #75200 8 Channel Mux to control the unit via remote commands. The keywords may be upper or lower case. The words must be typed correctly. Incorrect typing or misunderstood words are returned as typed followed by a question mark.
STATUS (C/R) Returns the contents of each channel’s tag data. Also returns the firmware version.

CHANNELx (C/R) Returns “Current Identification for Channel #x: “ –then– Enter up to 16 characters: . You may then type in up to 16 characters. Anything less than 16 will cause the remaining characters to be spaces. Anything more than 16 will truncate the entry. The tag data is stored in EEPROM memory and remains intact when power is off.

CHANNEL_x (C/R) Same as Channelx above.

Help (C/R) or ? (C/R) Returns with a list of available commands.

Rear Panel
Connections:

(8) Inputs CS-5259: (8) BJ-77 TWINAX connectors. Center pin= D+, Ring D-

(2) Outputs CS-5259: (2) BJ-77 TWINAX connectors. Center pin= D+, Ring D-
**Control:** DE-9 Female. RS-232 Pin 5=GND, Pin 2=T, Pin 3=R.

**AC INPUT:** AC mains voltage is applied through the IEC connector. 90–265 VAC 47-470 Hz.

**NETWORK:** RJ-45 Ethernet connector.

**Power Supply:**

The model #75200 8 channel mux uses a “Universal Input” switching power supply for cool and reliable operation. The power supply accepts any common voltage between 90 and 265 VAC or 100 to 370 Volts DC without any adjustment. A separate line filter is built into the Model #75200 8 Channel Mux for an additional measure of EMI suppression. The Power supply used is UL listed and approved by several other agencies.

**Routine Maintenance:**

Remove dust from the cabinet when it accumulates. The front panel may cleaned with a soft cotton cloth. Use only a small amount of mild soap and water solution to dampen the cloth if necessary.

No routine checks or adjustments are required.